What is claimed is:

1. An optical pickup device for detecting a focus error of said light beam, having an irradiation optical system for focusing a light beam to form a spot on a track on an information recording surface of an optical recording medium, and a light detection optical system for leading return light reflected back from the spot to a photodetector, said optical pickup apparatus comprising:

a focus error detecting optical element having an area quadrisected into first through fourth quadrants from the center of an optical path of the return path along two division lines extending corresponding to a direction in which the track extends and a direction perpendicular to the extending direction on a plane substantially perpendicular to the optical path of the return path, for applying the return light passing through adjacent ones of said areas on the same side of said division line with astigmatism in directions rotated by 90° from each other about the optical path, and for separating the return light into at least four corresponding to said areas; and

a photodetector having a plurality of spaced light receiving elements for receiving the separated return light, each of said light receiving elements having contour lines corresponding to said division lines on an image plane on which a light beam is shaped into a circular beam in the optical system in which the astigmatism is applied, and comprised of two light receiving areas divided by a bisect line extending substantially

in parallel with one of the contour lines.

2. An optical pickup device according to claim 1, wherein said bisect line of said light receiving element extends corresponding to a direction perpendicular to the direction in which the track extends.

3. An optical pickup device according to claim 1, wherein said bisect line of said light receiving element extends to a position at which signals output from two light receiving areas of said light receiving element, generated by spots of the return light received on said light receiving element on the image plane on which the light beam is shaped into a circular beam in the optical system in which the astigmatism is applied, is substantially equal.

4. An optical pickup device according to claim 1, further comprising a calculating circuit connected to said light receiving elements for generating a focus error signal from the sum of differences of signals output from two light receiving areas of said light receiving elements.

5. An optical pickup device according to claim 1, further comprising auxiliary light receiving elements for receiving the return light out of two line image ranges caused by the astigmatism, said auxiliary light receiving elements positioned along the contour line corresponding to the bisect

line of said light receiving element.

6. An optical pickup device according to claim 5, further comprising a calculating circuit connected to said auxiliary light receiving elements for calculating the sum of signals output from said auxiliary light receiving elements generated by the return light from two sets of areas existing at diagonal positions in said first through fourth quadrants.

7. An optical pickup device according to claim 5, further comprising a capture range calculating circuit connected to said light receiving element and said auxiliary light receiving elements for adding the sum of signals output from said auxiliary light receiving elements generated by the return light from two sets of areas existing at diagonal positions in said first through fourth quadrants to the sum of differences of outputs from two light receiving areas of said light receiving elements.

8. An optical pickup device according to claim 5, wherein said auxiliary light receiving elements are integrated into said light receiving areas on the opposite side of said contour line corresponding to said division line of said light receiving elements.

9. An optical pickup device according to claim 1, wherein said focus error detecting optical element includes:

cylindrical lenses placed at one set of respective diagonal positions in said first through fourth quadrants, and having central axes extending in a direction in which said division line extends; and

cylindrical lenses placed at the other set of respective diagonal positions in said first through fourth quadrants, and having central axes extending in a direction at 90° to the direction in which said division line extends,

wherein said cylindrical lenses placed in areas at at least one set of diagonal positions have the optical axes offset from said division line in parallel therewith.

10. An optical pickup device according to claim 9, wherein said cylindrical lenses placed in the area at said at least one set of diagonal positions have the optical axes offset from said division line and on opposite sides to each other.

11. An optical pickup device according to claim 10, wherein said offset cylindrical lenses are placed only in the areas at said one set of diagonal positions, further comprising deflecting prism surfaces positioned in the areas of said cylindrical lenses at the remaining set of diagonal positions, and tilted at different angles to planes vertical to optical paths of the return light in said areas.

12. An optical pickup device according to claim 1, wherein:

said focus error detecting optical element includes:

cylindrical lenses placed at one set of respective diagonal positions in said first through fourth quadrants, and having central axes extending in a direction in which said division line extends; and

cylindrical lenses placed at the other set of respective diagonal positions in said first through fourth quadrants, and having central axes extending in a direction at 90° to the direction in which said division line extends, and

said optical pickup device further comprising deflecting prism surfaces placed in areas at at least one set of diagonal positions, and tilted with respect to planes perpendicular to the optical paths of the return light in said areas.

13. An optical pickup device according to claim 12, wherein said deflecting prism surfaces placed in the areas at said at least one set of diagonal positions are tilted at different angles to the places perpendicular to the plane vertical to the optical paths of the return light in said areas.

14. An optical pickup device according to claim 13, wherein said deflecting prism surfaces are placed only in the areas at said at least one set of diagonal positions, said cylindrical lenses placed in the areas at the remaining set of diagonal positions have their central axes offset from said division line in parallel therewith and on opposite side to each

other.

15. An optical pickup device according to claim 9, wherein said light receiving elements are arranged in parallel with one of said division lines of said focus error detecting optical element.

16. An optical pickup device according to claim 15, further comprising:

a diffraction grating disposed in said irradiation optical system; and

a pair of sub-photodetector disposed on one side of a column of said parallelly arranged light receiving elements for receiving a + primary diffraction sub-beam and a - primary diffraction sub-beam, respectively,

wherein said optical pickup device conducts a tracking control based on a three-beam method.

17. An optical pickup device according to claim 9, further comprising:

a comparator/detector for detecting a difference in phase of respective sum signals output from two sets of said light receiving elements existing at diagonal positions for independently receiving the return light passing through said first through fourth areas of said focus error detecting optical element, wherein said optical pickup device conducts a tracking control based on a phase difference method.

18. An optical pickup device according to claim 1, further comprising auxiliary light receiving elements each disposed adjacent to each of said light receiving areas along said contour line corresponding to said division lines of said light receiving elements.

19. An optical pickup device according to claim 18, further comprising a focus error signal correction calculating circuit connected to said light receiving elements and said auxiliary light receiving elements for adding the sum of differences of signals output from said auxiliary light receiving elements to the sum of differences of signals output from two light receiving areas of said light receiving elements to generate a focus error signal.

20. A focus error detecting method for detecting a focus error in a light beam in an optical pickup device having an irradiation optical system for focusing the light beam to form a spot on a track on an information recording surface of an optical recording medium, and a light detection optical system for leading return light reflected back from the spot to a photodetector, said method comprising the steps of:

using a focus error detecting optical element having an area quadrisected into first through fourth quadrants from the center of an optical path of the return path along two division lines extending corresponding to a direction in which the track

extends and a direction perpendicular to the extending direction on a plane substantially perpendicular to the optical path of the return path, to apply the return light passing through adjacent ones of said areas on the same side of said division line with astigmatism in directions rotated by 90° from each other about the optical path, and to separate the return path into at least four corresponding to said areas; and

using a plurality of spaced light receiving elements for receiving the separated return light, each of said light receiving elements having contour lines corresponding to said division lines on an image plane on which a light beam is shaped into a circular beam in the optical system in which the astigmatism is applied, and comprised of two light receiving areas divided by a bisect line extending substantially in parallel with one of the contour lines, to generate a focus error signal from the sum of differences of signals output from two light receiving areas of said light receiving elements.